SECTION 1: Identification

1.1. Product identifier

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>HEXACHLORODISILOXANE, 90%</td>
</tr>
<tr>
<td>Product code</td>
<td>SIH5910.0</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Formula</td>
<td>Cl₆OSi₂</td>
</tr>
<tr>
<td>Synonyms</td>
<td>SILICON OXYCHLORIDE</td>
</tr>
<tr>
<td></td>
<td>PERCHLORODISILOXANE</td>
</tr>
<tr>
<td></td>
<td>SILICON CHLORIDE OXIDE</td>
</tr>
<tr>
<td></td>
<td>BIS(TRICHLOROSILYL)OXIDE</td>
</tr>
<tr>
<td></td>
<td>TRICHLORO(TRICHLOROSILOXO)SILANE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANOCHLOROSILANE</td>
</tr>
</tbody>
</table>

1.2. Recommended use of the chemical and restrictions on use

Recommended use: Chemical intermediate
For research and industrial use only

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
- Skin corrosion/irritation Category 1B: H314
- Serious eye damage/eye irritation Category 1: H318
- Specific target organ toxicity (single exposure) Category 3: H335
- Full text of H statements: see section 16

2.2. Label elements

GHS-US labeling
- Hazard pictograms (GHS-US):
  - GHS05
  - GHS07

Signal word (GHS-US): Danger

- Hazard statements (GHS-US):
  - H314 - Causes severe skin burns and eye damage
  - H335 - May cause respiratory irritation

- Precautionary statements (GHS-US):
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection
  - P260 - Do not breathe vapors
  - P264 - Wash hands thoroughly after handling
  - P271 - Use only outdoors or in a well-ventilated area
  - P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
  - P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower
  - P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
  - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - P310 - Immediately call a doctor
  - P321 - Specific treatment (see first aid instructions on this label)
  - P363 - Wash contaminated clothing before reuse
  - P403+P323 - Store in a well-ventilated place. Keep container tightly closed
HEXACHLORODISILOXANE, 90%
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2.3. Hazards not otherwise classified (HNOC)
Other hazards not contributing to the classification:
Hydrogen chloride may be formed by reaction with water and moisture in air. The US OSHA PEL (TWA) for hydrogen chloride is 5 ppm.

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexachlorodisiloxane</td>
<td>(CAS No) 14986-21-1</td>
<td>90 - 100</td>
<td>Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335</td>
</tr>
<tr>
<td>Octachlorotrisiloxane</td>
<td>(CAS No) 31323-44-1</td>
<td>0 - 10</td>
<td>Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures
Not applicable

4.1. Description of first aid measures
First-aid measures general:
Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

First-aid measures after skin contact:
Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact:
Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion:
Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries:
Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation:
May cause respiratory irritation.

Symptoms/injuries after skin contact:
Causes (severe) skin burns.

Symptoms/injuries after eye contact:
Causes serious eye damage.

Symptoms/injuries after ingestion:
May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Alcohol-resistant foam. Carbon dioxide. Dry chemical. Use of high expansion foam (100:1) is recommended to cover flames.

Unsuitable extinguishing media:
Water.

5.2. Special hazards arising from the substance or mixture
Fire hazard:
Irritating fumes of hydrogen chloride and organic acid vapors may develop when material is exposed to water or open flame.

Explosion hazard:
Hexachlorodisiloxane is not flammable. The following information is provided to assist if hexachlorodisiloxane is present in a fire situation.

5.3. Advice for firefighters
Firefighting instructions:
Exercise caution when fighting any chemical fire. Use only dry media to extinguish flames. Water spray or fog should only be used to knock down hydrogen chloride vapors in areas downwind from the fire.

Protection during firefighting:
Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Use only outdoors or in a well-ventilated area.
Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed. Store locked up. Store in sealed corrosion resistant containers.
Incompatible materials: Acids, Alcohols, Oxidizing agent.
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Appropriate engineering controls: Provide local exhaust or general room ventilation.
Personal protective equipment: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Hand protection: Neoprene or nitrile rubber gloves.
Eye protection: Chemical goggles or face shield. Contact lenses should not be worn.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Appearance: Clear liquid.
Molecular mass: 284.89 g/mol
Color: Straw.
Odor: Acrid. Similar to hydrogen chloride.
Odor threshold: No data available
Refractive index: 1.428
pH: No data available
Relative evaporation rate (butyl acetate=1): No data available
Melting point: < 0 °C
Freezing point: No data available
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point</td>
<td>137 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>1.5 mm Hg @ 0°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 5</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.575</td>
</tr>
<tr>
<td>VOC content</td>
<td>100 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Reacts violently with water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**  
No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**  
No additional information available

**10.2. Chemical stability**  
Stable in sealed corrosion resistant containers stored under a dry inert atmosphere.

**10.3. Possibility of hazardous reactions**  
Reacts with water and moisture in air, liberating hydrogen chloride.

**10.4. Conditions to avoid**  
Heat. Open flame. Sparks.

**10.5. Incompatible materials**  

**10.6. Hazardous decomposition products**  

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/iritation</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/iritation</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>NOTE: Material may form a siloxane polymer on the skin, eyes or in the lungs.</td>
</tr>
<tr>
<td>Symptoms/injuries after inhalation</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>Symptoms/injuries after skin contact</td>
<td>Causes (severe) skin burns.</td>
</tr>
<tr>
<td>Symptoms/injuries after eye contact</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Symptoms/injuries after ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
</tbody>
</table>
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Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other adverse effects : This substance may be hazardous to the environment.
Effect on ozone layer : No additional information available
Effect on the global warming : No known effects from this product.
GWPmix comment : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
UN-No.(DOT) : 2987
DOT NA no. : UN2987

14.2. UN proper shipping name
Transport document description : UN2987 Chlorosilanes, corrosive, n.o.s. (HEXACHLORODISILOXANE), 8, II
Proper Shipping Name (DOT) : Chlorosilanes, corrosive, n.o.s. (HEXACHLORODISILOXANE)
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 8 - Corrosive

DOT Packaging Non Bulk (49 CFR 173.xxx) : 206
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Packaging Exceptions (49 CFR 173.xxx) : None

14.3. Additional information
Emergency Response Guide (ERG) Number : 156
Other information : No supplementary information available.

Transport by sea
DOT Vessel Stowage Location : C - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
SECTION 15: Regulatory information

15.1. US Federal regulations

**Hexachlorodisiloxane (14986-21-1)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Octachlorotrisiloxane (31323-44-1)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

**CANADA**

**Hexachlorodisiloxane (14986-21-1)**
Listed on the Canadian NDSL (Non-Domestic Substances List)

**Octachlorotrisiloxane (31323-44-1)**
Listed on the Canadian NDSL (Non-Domestic Substances List)

**EU-Regulations**

**Hexachlorodisiloxane (14986-21-1)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**Octachlorotrisiloxane (31323-44-1)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

**Hexachlorodisiloxane (14986-21-1)**
Listed on the Korean ECL (Existing Chemicals List)

**Octachlorotrisiloxane (31323-44-1)**
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

No additional information available

SECTION 16: Other information

**Full text of H-phrases:**

- **H314**: Causes severe skin burns and eye damage
- **H318**: Causes serious eye damage
- **H335**: May cause respiratory irritation

**Abbreviations and acronyms**

- **ND**: Not Determined; **No Data**
- **NA**: Not Applicable; **LD**: Lethal Dose; **LC**: Lethal Concentration; **ATE**: Acute Toxicity Estimates; **H**: hour; **°C**: °C unless otherwise stated; **mm**: millimeters Hg, torr; **PEL**: permissible exposure level; **TWA**: time weighted average; **TLV**: threshold limit value; **TG**: Test Guideline; **NIOSH**: National Institute for Occupational Safety and Health; **IARC**: International Agency for Research on Cancer; **NTP**: National Toxicology Program; **HMIS**: Hazardous Material Information System; **CAS No.**: Chemical Abstract Service Registration Number; **EC No.**: European Commission Registration Number; **EC Index No.**: European Commission Index Number; **OECD**: The Organisation for Economic Co-operation and Development; **GHS**: The Globally Harmonized System of Classification and Labelling.

**HMIS III Rating**

- **Health**: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- **Flammability**: 0 Minimal Hazard - Materials that will not burn
- **Physical**: 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

Prepared by safety and environmental affairs.

Date of issue: 03/02/2015  
Revision date: 02/03/2017  
Version: 2.1
HEXACHLORODISILOXANE, 90%
Safety Data Sheet

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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